What is claimed is:

1. A minimally invasive method of holding two tissue parts together, said method comprising the steps of:

providing a clip having two end points which are separated from each other when said clip is in an open configuration and tending to return to a naturally closed configuration by reducing distance between said end points when in said open configuration;

placing said clip across the two tissue parts such that said two end points each penetrate completely a different one of the two tissue parts while said clip is in said open configuration; and

allowing said clip to tend to return to said closed configuration, whereby the two tissue parts are held together by said clip.

2. The method of claim 1 wherein said two end points of said clip are each detachably attached to a tissue penetrating needle through a flexible member, and wherein said step of placing said clip comprises penetrating and completely pulling one of the needles through one of said two tissue parts and the other of the needles through the other of the two tissue parts.

3. The method of claim 2 further comprising the steps of:

releasably grabbing one of said needles by a needle holder;

inserting a cannula through an incision towards the tissue parts;

advancing said needle holder through said cannula with said one needle grabbed thereby;

operating said needle holder to cause said one needle to penetrate and be completely pulled through said one tissue part from one side to the other side;

thereafter releasing said needle from said needle holder;

thereafter grabbing and pulling said needle again by said needle holder from the other side of said one tissue part;

thereafter releasably grabbing the other of said needles by said needle holder, advancing said needle holder through said cannula with the other needle grabbed thereby, operating said needle holder to cause the other needle to penetrate and be completely pulled through the other tissue part from one side to the other side thereof;

thereafter situating said clip on both of said two tissue parts; and

thereafter detaching said clip from the needles.

4. The method of claim 3 wherein said needle holder includes an outer tube and an inner member which has a front end adapted to releasably grab said needle and is slidable inside said outer tube.

5. The method of claim 4 wherein said needle holder further includes a spring which is disposed inside said outer tube and serves to apply a force on said inner member backward away from said front end.

6. The method of claim 1 wherein said clip comprises a wire made of a shape memory material.

7. The method claim 1 wherein said clip in said closed configuration is looped by more than 360°

8. The method of claim 1 wherein one of said two end points of said clip is detachably attached to a tissue penetrating needle through a flexible member, and wherein said step of placing said clip comprises penetrating and completely pulling said needle through one of the two tissue parts and thereafter the other of the two tissue parts.

9. Apparatus for minimally invasive valve repair, said apparatus comprising:

a tissue penetrating needle connected through a flexible member to a clip, said clip having two end points which are separated from each other when said clip is in an open configuration and tending to return to a naturally closed configuration by reducing distance between said end points when in said open configuration; and

a needle holder including an outer tube and an inner member which has a front end adapted to grab said needle and is slidable inside said outer tube.

10. The apparatus of claim 10 wherein said needle is one of a pair of needles, said flexible member is one of a pair of flexible members each connected to a corresponding one of said two end points of said clip, and said release mechanism is a pair of release mechanisms each being directly attached to a corresponding one of said one end points of said clip.

11. The apparatus of claim 9 wherein said needle holder further includes a spring which is disposed inside said outer tube and serves to apply a biasing force on said inner member backward away from said front end.

12. The apparatus of claim 11 wherein said front end of said inner member has a slit for accepting and grabbing said needle therein.

13. The apparatus of claim 12 wherein said outer tube, said inner member and said slit are designed such that said slit opens wide enough to accept said needle therein and to release said needle therefrom if said inner member is pushed forward against said biasing force and that said slit becomes narrower and firmly grips said needle therein if said inner member is moved backward.

14. The apparatus of claim 9 wherein said clip is generally U-shaped when in said open configuration.

15. The apparatus of claim 9 wherein said clip comprises a wire made of a shape memory material.

16. The apparatus of claim 9 wherein said clip in said closed configuration is looped by more than 360°

17. A clip assembly comprising:

two clips each having two end points which are separated from each other when said clips are in an open configuration and tending to return to a naturally closed configuration by reducing distance between said end points when the clip is in said open configuration;

two tissue penetrating needles each connected to one of said two end points of a corresponding one of said two clips through a flexible member; and

a flexible connector connecting the other end points of said two clips together.

18. The clip assembly of claim 17 further comprising releasing means for normally keeping said two clips in said open configuration and releasing each of said two clips to become separated from the associated flexible member to thereby allow said clips to begin returning to said closed configuration.

19. The clip assembly of claim 17 wherein said clips comprise a wire made of a shape memory material.

20. A minimally invasive method of holding two tissue parts together, said method comprising the steps of:

providing a clip assembly which comprises two clips each having two end points which are separated from each other when said clips are in an open configuration and tending to return to a naturally closed configuration by reducing distance between said end points when the clip is in said open

configuration, two tissue penetrating needles each connected to one of said two end points of a corresponding one of said two clips through a flexible member, and a flexible connector connecting the other end points of said two clips together;

penetrating and completely pulling one of the needles through a tissue part and penetrating and completely pulling the other of the needles through an adjacent tissue part while said clips are each in said open configuration;

pulling the needles until each of said clips is hooked to a corresponding one of the tissue parts; and

allowing said clips to start to return to said naturally closed configuration, whereby said two tissue parts are held together by said flexible connector stretched between said clips.

21. The method of claim 20 wherein said clip assembly further comprises releasing means for normally keeping said two clips in said open configuration and releasing each of said two clips to become separated from the associated flexible member to thereby allow said clips to begin returning to said closed configuration, and wherein said clips are allowed to start to return to said naturally closing configuration by separating said clips from said needles through said releasing means.

22. The method of claim 20 wherein said clips comprise a wire made of a shape memory material.